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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,024	09/05/2003	Fred S. Cook	2037 (1-16055)	9045

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EXAMINER	
MUI, GARY	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
09/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/657,024	COOK ET AL.	
	Examiner	Art Unit	
	Gary Mui	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments with respect to claims 1 - 16 have been considered but are moot in view of the new ground(s) of rejection.

2. Claims 1 – 16 are currently pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 2, 7, 11, and 13 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker et al. (US 2002/0141355 A1; hereinafter "Struhsaker") in view of Porter (US 2004/0218604 A1)

For claim 1, Struhsaker teaches providing an internet protocol backbone network having a plurality of access points that include traffic control devices, and further providing at least two service classes for the internet protocol backbone network, the service classes distinguished by a level of service (see paragraph 0084, multiple modulation groups are used to group subscribers with common format together and the subscriber access device are used to transmit and receive data); allowing the users of the network to select one of the service and further dividing the users into the selected service classes (see paragraph 0084; each subscriber has a service level it has chosen and each subscriber is grouped together to its own modulation group). Struhsaker fails to teach identifying the usage level of the lower service class; comparing the usage level of the lower service class to the capacity of the backbone network; and adjusting the traffic control devices at the access points to the backbone network for the lower service class to allow sufficient capacity in the network for transport of messages for the other class. Porter from the same field of endeavor teaches adjusting the bandwidth in the lower class and to change to maintain the total available bandwidth (see paragraph 0027). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to adjust the bandwidth as taught by Porter into the access

system of Struhsaker. The motivation for doing this is to maintain the efficiency of the system by maintaining to the user service level agreement during times of congestion.

For claim 2, Struhsaker fails to teach the identification of the usage level includes aggregation of the message flow over the backbone network. Porter form the same field of endeavor teaches the system then evaluates the aggregate bandwidth required to serve the users queued in classes 2 and 3 and (given that the system is overloaded) calculates by how much the bandwidth requested in classes 2 and 3 must be reduced in order to match the total bandwidth available (see paragraph 0027 lines 17 – 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to identify the usage level as taught by Porter into the access system of Struhsaker. The motivation for doing this is to maintain the efficiency of the system by maintaining to the user service level agreement during times of congestion.

For claim 7, Struhsaker fails to teach a backbone network tool is utilized to identify the usage level. Porter form the same field of endeavor teaches the system then evaluates the aggregate bandwidth required to serve the users queued in classes 2 and 3 and (given that the system is overloaded) calculates by how much the bandwidth requested in classes 2 and 3 must be reduced in order to match the total bandwidth available (see paragraph 0027 lines 17 – 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to identify the usage level as taught by Porter into the access system of Struhsaker. The motivation for doing this is to maintain the efficiency of the system by maintaining to the user service level agreement during times of congestion.

For claim 11, Struhsaker and Porter fails to teach the lesser service class includes messages that have been selectively degraded. However, it is well known in the art that messages in lower service class are degraded. Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the lesser service class includes messages that have been selectively degraded in the method taught by Struhsaker and Porter in order to allow higher throughput.

For claim 13, Struhsaker teaches the traffic control devices include at least one traffic shaper (see paragraph 0085; modem controls the transmission of data).

For claim 14, Porter discloses identification of the messages belonging to other classes before entry into the traffic shaper (see Figure 2, Box 12 Classifier, Box 16 Allocator and arrow directions connecting Classifier and Allocator).

For claim 15, Struhsaker discloses the traffic control devices include at least one media gateway (see Figure 1 Box 104).

For claim 16, Struhsaker and Porter teach all the subject matter of the claimed invention. Struhsaker and Porter fail to teach identification of the messages belonging to other classes before entry into the media gateway. However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use identification of the messages belonging to other classes before entry into the media gateway in order to allow more efficient data processing by offloading the identification of other classes' messages in another device.

Claim Rejections - 35 USC § 103

7. Claims 3 – 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker and Porter as applied to claim 1 above, and further in view of Bradd (US 2003/0123388 A1).

For claim 3, Struhsaker and Porter teaches all of the claimed subject matter with the exception of the identification of the usage level is determined by examination of the traffic level connecting the origination address range to the destination address range fro the message flow over the backbone network. Bradd from the same or similar field of endeavors teach the identification of the usage level is determined by examination of the traffic level connecting the origination address range to the destination address range fro the message flow over the backbone network (see paragraph 75, lines 8 – 16, 18 – 21). Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the identification of the usage level is determined by examination of the traffic level connecting the origination address range to the destination address range fro the message flow over the backbone network in the method taught by Struhsaker and Porter in order to provide reliable connection by determining if a call can be accepted (see Bradd paragraph 76, lines 1 – 8

For claim 4, Struhsaker and Porter teaches all of the claimed subject matter with the exception of the identification of the usage level is determined by examination of the backbone network links connecting the origination addresses to the destination addresses for the message flow over the backbone network. Bradd from the same or similar field of endeavors teach the identification of the usage level is determined by examination of the backbone network links connecting the origination addresses to the destination addresses for the message flow over

the backbone network (see paragraph 75, lines 8 – 16, 18 – 21). Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the identification of the usage level is determined by examination of the backbone network links connecting the origination addresses to the destination addresses for the message flow over the backbone network in the method taught by Porter and Burst JR. in order to provide reliable connection by determining if a call can be accepted (see Bradd paragraph 76, lines 1 – 8).

For claim 5, Porter discloses collecting and analyzing the occupancy data of the backbone links to determine path occupancy levels by class of service (see paragraph 27, lines 12 – 17); determining the amount of occupancy being utilized by the lesser service class (see paragraph 27, lines 12 – 14); subtracting the amount of occupancy being utilized by the lesser service class from the available backbone network capacity (see paragraph 27, lines 17 – 21, wherein determining how much bandwidth requested in class 2 and 3 must be reduced implies the amount of bandwidth requested by class 2 and 3 have to be subtracted from the available bandwidth to determine the difference, which is to be reduced); and comparing the resulting difference to the capacity required to provide service to the other classes of service (see paragraph 27, lines 17 – 21, in order to provide service to class 1, available bandwidth must match the aggregate bandwidth of class 2 and 3).

For claim 6, Porter discloses the amount of occupancy being used by the lesser service class is statistically determined (see paragraph 27, lines 17 – 18, wherein the aggregate bandwidth required to serve the users queued in classes 2 and 3 implies the result is statistically determined).

For claim 9, Porter discloses the traffic control devices are adjusted to reduce the access to the backbone internet for the lesser service class when the traffic load from the other classes increases (see paragraph 14, lines 13 – 17, paragraph 27, line 8 – 11);

For claim 10, Porter discloses the traffic control devices are adjusted to increase the access to the backbone internet for the lesser service class when the traffic load from the other classes decreases (see paragraph 26, lines 18 – 24).

Claim Rejections - 35 USC § 103

8. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker and Porter as applied to claim 1 above, and further in view of Harris et al (US 6,999,759 B2; hereinafter "Harris").

For claim 8, Struhsaker and Porter teaches all of the claimed subject matter with the exception of the lesser service class is assigned a billing rate that is less than the billing rates fro the other service classes. Harris et al. from the same or similar field of endeavors teach the lesser service class is assigned a billing rate that is less than the billing rates fro the other service classes (see column 12, lines 12 – 18, column 14, lines 49 – 52). Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the lesser service class is assigned a billing rate that is less than the billing rates fro the other service classes in the method taught by Struhsaker and Porter in order to better utilized off-peak bandwidth by discouraging users to transfer data during peak load periods (see column 12, lines 44 – 48).

For claim 12 is rejected the same reason as above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chiu et al. (US 6,973,033 B1) and Sato et al. (US 7,257,098 B2) are cited to show a segmented IP backbone network access.

10. **Examiner's Note**: Examiner has cited particular paragraphs or columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Mui whose telephone number is (571) 270-1420. The examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GM 09.11.2007

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER